

# Spectrum D401-X-P5655-E-BD

Explosion-Proof HDTV 1080p with 32x zoom PTZ Camera

## Key Features

- HDTV 1080p with 32x optical zoom
- Forensic WDR and lightfinder 2.0
- Signed firmware and secure boot
- Focus recall and EIS
- 5G Wireless Connectivity
- Backwards compatible with 4G LTE Cat 4
- Wi-Fi 4 (802.11b/g/n) Wireless Modes
- Reliable Securing Kit included
- Made in USA
- NDAA-Compliant
- cFMus, Class I/II/III, Division 1, Zone 1/21, IECEx, ATEX, and UKCA approved.
- Operating Temperature: (see table on page 3)



Axis Camera Inside



## Description

Spectrum D401-X-P5655-E-BD explosion-proof camera is a cost-efficient, high performance PTZ with HDTV 1080p and 32x optical zoom. Enclosed in a patented stainless-steel or red aluminum explosion-proof housing, it's certified (cFMus, IECEx, ATEX and UKCA approved) for use in potentially combustible environments. The camera features Axis Forensic WDR for clarity in scenes that have both light and dark areas. Axis lightfinder 2.0 captures images in low-light while retaining rich colors and sharp detail in moving objects. Also, electronic image stabilization and enhanced security features such as signed firmware and secure boot are included in the camera.

Fully compatible with the RedAi - Vision Control System (VCS) and the RedAi - Vision Based Automation & Safety System (VBASS)

| Part Number                       | Description  | MP  | F No. | Image Sensor |
|-----------------------------------|--|-----|-------|--------------|
| D401-X-P5655-E-BD-01-01           | PoE - IEEE 802.3bt                                   | 2MP | 1.4   | 1/2.8        |
| D401-X-P5655-E-BD-02-02           | Media Converter (SFP) - 120 / 240 VAC - 50 / 60 Hz   | 2MP | 1.4   | 1/2.8        |
| D401-X-P5655-E-BD-02-03-02-RUT241 | Wireless - Teltonika 4G - 120 / 240 VAC - 50 / 60 Hz | 2MP | 1.4   | 1/2.8        |
| D401-X-P5655-E-BD-02-03-02-RUT271 | Wireless - Teltonika 5G - 120 / 240 VAC - 50 / 60 Hz | 2MP | 1.4   | 1/2.8        |

For 4G and 5G wireless models please add first suffix for operating region, eg (01 - Global, 02 - North America). Please call the office for more options  
For 4G and 5G wireless models please add second suffix for antenna type - (L - LTE), (W - Wi-Fi), (LW - LTE + Wi-Fi) and (LLW - LTE + LTE + Wi-Fi)



# Specifications

## Spectrum D401-X-P5655-E-BD

|                             |   |                                   |   |
|-----------------------------|---|-----------------------------------|---|
| <b>Camera</b>               |   | Supported protocols               | IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPSa, TLSa, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, NTCIP, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)   |
| Image sensor                | 1/2.8" progressive scan RGB CMOS  |                                   |   |
| Lens                        | Varifocal, 4.3-137.6 mm, F1.4 - 4.0<br>Horizontal field of view: 58.3° - 2.4°<br>Vertical field of view: 35.5° - 1.4°<br>Including EIS, barrel and pincushion distortion correction<br>Autofocus and auto-iris  |                                   |   |
| Day and night               | Automatically removable infrared-cut filter   |                                   |   |
| Minimum illumination        | Color: 0.1 lux at 30 IRE F1.4<br>B/W: 0.01 lux at 30 IRE F1.4   |                                   |   |
| Shutter speed               | 1/66500 s to 2 s  |                                   |   |
| Camera angle adjustment     | Pan: 360° endless, 0.1° - 350°/s<br>Tilt: 180°, 0.1° - 350°/s<br>Zoom: 32x optical, 12x digital, Total 384x zoom<br>256 preset positions, nadir flip, limited guard tour, control queue, on-screen directional indicator, set new pan 0°, focus window, focus recall  |                                   |   |
| Sensor                      | Axis P5655-E  |                                   |   |
| <b>System on chip (SoC)</b> |   | <b>System integration</b>         |   |
| Model                       | ARTPEC-7  | Application programming interface | Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at axis.com<br>One-click cloud connection<br>ONVIF® Profile G, ONVIF® Profile S, and ONVIF® Profile T, specification at onvif.org  |
| Memory                      | 1024 MB RAM, 512 MB Flash   | Event conditions                  | Audio: Audio detection<br>Device status: Above operating temperature, Above or below operating temperature, Below operating temperature, Fan failure, IP address removed, Network lost, New IP address, Shock detected, Storage failure, System ready, Within operating temperature, Edge storage, Recording ongoing, Storage disruption<br>I/O: Digital input, Manual trigger, Virtual input<br>MQTT subscribe<br>PTZ: PTZ malfunctioning, PTZ movement: Camera 1, PTZ preset position reached: Camera 1, PTZ ready<br>Scheduled and recurring: Scheduled event<br>Video: Day-night mode, Live stream open |
| Compute capabilities        | Machine learning processing unit (MLPU)   | Event actions                     | Play audio clips, day-night mode, go to preset position, guard tour, I/O, upload of images or video clips via FTP, SFTP, HTTP, HTTPS, network share and email, notification to email, HTTP, HTTPS, TCP and SNMP trap, overlay text, prioritized text, record video to SD card and network share, WDR mode<br>MQTT publish   |
| Video                       |   | Data streaming                    | Event data  |
| Video compression           | H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles<br>H.265 (MPEG-H Part 2/HEVC) Main Profile<br>Motion JPEG   | Built-in installation aids        | Pixel counter   |
| Resolution                  | 1920x1080 HDTV 1080p to 320x180   | <b>Analytics</b>                  |   |
| Frame rate                  | Up to 60/50 fps (60/50 Hz) in all resolutions   | Applications                      | Included<br>AXIS Object Analytics<br>AXIS Video Motion Detection, AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard, audio detection, advanced gatekeeper, autotracker 2<br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see axis.com/acap   |
| Video streaming             | Multiple, individually configurable streams in H.264, H.265 and Motion JPEG<br>Controllable frame rate and bandwidth<br>Axis Zipstream technology in H.264 and H.265<br>VBR/ABR/MBR H.264/H.265   | Axis Object Analytics             | Object classes: humans, vehicles<br>Trigger conditions: line crossing, object in area<br>Up to 10 scenarios<br>Metadata visualized with color-coded bounding boxes<br>Polygon include/exclude areas<br>Perspective configuration<br>ONVIF Motion Alarm event  |
| Image settings              | Compression, saturation, brightness, sharpness, contrast, local contrast, white balance, exposure control, exposure zones, Forensic WDR: Up to 120 dB depending on scene, defogging, day/night shift level, tone mapping, fine tuning of low-light behavior, rotation: 0°, 180°, text and image overlay, image freeze on PTZ, electronic image stabilization, scene profiles, 20 individual polygon privacy masks |                                   |   |
| <b>Audio</b>                |   |                                   |   |
| Audio input/output          | External microphone input or line input, line output (Requires Axis 10-pin Push-pull System Connector or Axis Multicable C I/O Audio Power 1 m/5 m, not included), automatic gain control   |                                   |   |
| Audio streaming             | Two-way, full duplex  |                                   |   |
| Audio encoding              | 24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz<br>Configurable bit rate   |                                   |   |
| <b>Network</b>              |   |                                   |   |
| Security                    | Password protection, IP address filtering, HTTPSa encryption, IEEE 802.1X (EAP-TLS)a<br>network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot  |                                   |   |

# Specifications (continued)

| General                           |  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
|-----------------------------------|--|-------------|------------------------------|-------------------------|---------------------------------|-------------------------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------------|---------------------------------|
| Casing (x)                        | A = Aluminum<br>S = Stainless Steel  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Weight                            | A = 28 lbs (13.2 kg)<br>S = 55 lbs (24.95 kg)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Dimensions                        | Height: 13.2 in (335 mm)<br>ø 8.6 in (218 mm)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Power                             | See models shown on previous page, or on Selection Matrix Data Sheet   |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Storage Conditions                | -40°C to 65°C<br>Humidity 5–95% RH (non-condensing)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Operating Conditions              | <table border="1"> <thead> <tr> <th>Part Number</th> <th>Certified Temperature C ( F)</th> </tr> </thead> <tbody> <tr> <td>D401-X-P5655-E-BD-01-01</td> <td>-20° to +55° C (-4° to +131° F)</td> </tr> <tr> <td>D401-X-P5655-E-BD-02-02</td> <td>-20° to +55° C (-4° to +131° F)</td> </tr> <tr> <td>D401-X-P5655-E-BD-02-03-02-RUT241</td> <td>-20° to +55° C (-4° to +131° F)</td> </tr> <tr> <td>D401-X-P5655-E-BD-02-03-02-RUT271</td> <td>-20° to +55° C (-4° to +131° F)</td> </tr> </tbody> </table>  | Part Number | Certified Temperature C ( F) | D401-X-P5655-E-BD-01-01 | -20° to +55° C (-4° to +131° F) | D401-X-P5655-E-BD-02-02 | -20° to +55° C (-4° to +131° F) | D401-X-P5655-E-BD-02-03-02-RUT241 | -20° to +55° C (-4° to +131° F) | D401-X-P5655-E-BD-02-03-02-RUT271 | -20° to +55° C (-4° to +131° F) |
| Part Number                       | Certified Temperature C ( F)   |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| D401-X-P5655-E-BD-01-01           | -20° to +55° C (-4° to +131° F)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| D401-X-P5655-E-BD-02-02           | -20° to +55° C (-4° to +131° F)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| D401-X-P5655-E-BD-02-03-02-RUT241 | -20° to +55° C (-4° to +131° F)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| D401-X-P5655-E-BD-02-03-02-RUT271 | -20° to +55° C (-4° to +131° F)  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Approvals                         | <p><b>Hazardous Area</b><br/>FM3600, FM3615, ANSI/ISA/EN/IEC/CAN/CSA-C22.2 60079-0, ANSI/UL/EN/IEC/CAN/CSA-C22.2 60079-1, ANSI/UL/EN/IEC/CAN/CSA-C22.2 60079-31</p> <p><b>EMC</b><br/>EN 55032 Class A, EN 50121-4, IEC 62236-4, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 32 Class A, KC KN32 Class A, KC KN35</p> <p><b>Safety</b><br/>IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252</p> <p><b>Environment</b><br/>IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)</p> <p><b>Network</b><br/>NIST SP500-267</p>  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Explosion-proof Certifications    | <p><b>USA (Divisions):</b><br/>Class I Division 1 Groups B,C,D T6, type 4X, IP66/67 Class II/III, Division 1, Groups E,F,G T6, Ta = -20°C to +55°C<br/>Certificate: FM17US0156X</p> <p><b>USA and Canada (Zones):</b><br/>Class I, Zone 1, AEx/Ex db IIB+H2 T6 Gb Ta<br/>-20°C to +55°C, Type 4X, IP66/67<br/>Zone 21, AEx/Ex tb IIIC T85 °C Db Ta = -20°C to +55°C, Type 4X, IP66/67<br/>Certificate: FM17US0156X and FM18CA0103X</p> <p><b>ATEX:</b><br/>II 2 G Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66/67<br/>II 2 D Ex tb IIIC T85 °C Db Ta = -20°C to +55°C, IP66/67<br/>Certificate: FM18ATEX0057X</p> <p><b>IECEX:</b><br/>Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66/67 Ex tb IIIC T85 °C Db Ta = -20°C to +55°C, IP66/67<br/>Certificate: FMG 18.0020X</p> |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Video Management Software         | AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at <a href="http://axis.com/vms">axis.com/vms</a>  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Languages (Camera)                | English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |
| Warranty                          | 5-year limited warranty, see <a href="http://spectrumcamera.com/warranty">spectrumcamera.com/warranty</a>  |             |                              |                         |                                 |                         |                                 |                                   |                                 |                                   |                                 |

# Approvals & Dimensions



8935 ALMEDA GENOA RD.  
HOUSTON, TEXAS 77075  
USA

CERT NO. FM17USXXXXX

INPUT: VOLTS, WATTS

MODEL NUMBER: DAA-BB-CC-DD-EE-FF-GG-HH-II SERIAL: TIME-MO-DY-YEAR

Class I Division 1 Groups B,C,D T6, Type 4X, IP66

Class II/III, Division 1, Groups E,F,G T6

- WARNINGS: Ta = -20°C to +55°C
- NOT INCLUDING KETONE OR ESTER ATMOSPHERES
- CONDUIT ENTRIES ARE M20 X 1.5
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
- INSTALL SEAL AT ENCLOSURE ENTRY

US Patent 9917428  
US Patent D858611



MADE IN USA  
CERT NO.  
FM17USXXXXX  
FM18CAXXXXX



SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY  
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA

MODEL: DAA-BB-CC-DD-EE-FF-GG-HH-II SERIAL: TIME-MO-DY-YEAR  
INPUT: VOLTS, WATTS

Class I, Zone 1, AEx/Ex db mb [ia Ga] IIB+H2 T6 Gb Ta = -20°C to +55°C, Type 4X, IP66  
Zone 21, AEx/Ex mb tb [ia Da] IIIC T85°C Db Ta = -20°C to +55°C, Type 4X, IP66



II 2 (1) G db mb [ia Ga] Gb T6 Ta = -20°C to +55°C, IP66  
II 2 (1) D Ex mb tb [ia Da] IIIC T85°C Db Ta = -20°C to +55°C, IP66



CERT NO. FM18ATEXXXXXX, IECEx FMG XXXXXXX, FM22UKXXXXXX



WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT  
INSTALL SEAL AT ENCLOSURE ENTRY  
www.spectrumcamera.com US Patent 9917428  
US Patent D858611

