The SOLO8 Software Defined Radio (SOL8SDR) is an ultra-miniature COFDM digital video transceiver, designed specifically for Point-of-View (PoV), body-worn and concealment applications.

Three enclosure variants are available. Robust (-R) provides a passively cooled IP66 rated enclosure ideal for outdoor, or body worn applications. Concealment (-C) is an ultra-miniature package for integration into concealment solutions. Plain (-P) provides a compact higher power solution (2x500mW) for increased range and enhanced connectivity with native RJ45 and USB as standard.

With proven DTC COFDM and H.264 encoder technology at its core, the exceptionally small size and ultra-low power consumption (5 to 10W mode dependant, higher for 2x500mW plain enclosure variant) enables stunning high quality high definition images from the heart of the action, in situations never previously possible due to equipment size and battery run-time constraints.

Built-in motion detection can be used to further expand battery life, or storage capacity, with event triggered transmission and/or recording.

The DTC SOL8SDR is derived from the successful SOLO7 HD Nano Transmitter range. It uses the same high performance video codec on a more flexible yet compact hardware platform. The SOLO8 supports dual High Definition HD-SDI inputs. In addition the SOL8SDR integrates 128GB of internal video storage on Flash memory. An integral battery backed-up real time clock provides a time and date stamp. The SOL8SDR also provides both USB and Ethernet I/O interfaces. The Ethernet interface supports IP streaming of video via both ‘RTSP’ and multicast streaming compliant to ONVIF Profile S. This one unit can effectively be either an IP encoder, front end recorder, a COFDM TX, or an IP Mesh NETNode in one box.

The small size and ultra-low power consumption make the SOLO8 Software Defined Radio ideal for concealments and hidden point of view applications.

The SOLO8 Software Defined Radio employs ultra-low latency High Profile H.264 (MPEG-4 AVC) encoding for excellent image quality retention over the wireless link or contested IP network.

The transmitter integrates an ISM band telemetry modem, which currently supports 433MHz and 915MHz. This telemetry receiver allows return command and control information to be sent to the SOL8SDR unit. The command information can be used to control the inbuilt recording and to power on and off the unit. The return data link has sufficient capacity to support PTZ commands for a connected PTZ camera – VISCA and PELCO-D protocols can be supported.

Software Defined Radio App available options are as a COFDM Transmitter (SDRAPP-TX), an IP Encoder (SDRAPP-ENC) and IP MIMO Mesh (SDRAPP-MESH) supported by software updates.
SOLO8 Software Defined Radio (Plain)
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**Specification:**

**IO**
- RF COFDM Output 1: SMA (female)
- RF COFDM Output 2: SMA (female)
- RF Telemetry Input: SMA (female)
- Video SD/HD-SDI 1: DIN 1.0/2.3 (female)
- Video SD/HD-SDI 2: DIN 1.0/2.3 (female)
- USB host*: USB Type A
- Power Input: Lemo (4 pins)
- Power Output: D-sub (9 way)
- Microphone/Line Input: 3.5mm socket (3 pole)
- Headphone Output (mono): 3.5mm socket (3 pole)
- PTZ Control or Data IO: D-sub (9 way)
- Gigabit Ethernet: RJ45

**COFDM Output**
- Power: 500mW, 0.25dB incremental control
- Tuning Range: Frequency variant dependant
- Tuning Step: 125kHz

**Telemetry Transceiver**
- Tuning Range: Frequency variant dependant
- Code reference 43: 433.05-434.79MHz
- Code reference 91: 902-928MHz
- Receiver Sensitivity: -114dBm

**DVB-T Modulation**
- DVB-T Bandwidth: 8MHz, 7MHz, 6MHz modes
- DVB-T FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- DVB-T Constellation: QPSK, 16QAM, 64QAM
- DVB-T Guard Interval: 1/4, 1/8, 1/16, 1/32
- DVB-T Bitrates: 1.555Mbps to 31.668Mbps

**Narrowband/UMVL Modulation**
- NB Bandwidth: 2.5MHz, 1.25MHz and 625kHz modes
- UMVL Bandwidth: 8MHz, 7MHz and 6MHz modes
- NB/UMVL FEC: 1/2, 2/3
- NB/UMVL Constellation: QPSK, 16QAM, BPSK, 8PSK
- NB/UMVL Guard Interval: 1/8, 1/16
- NB Bitrates: 144kbps to 4.879Mbps
- UMVL Bitrates: 1.317Mbps to 14.869Mbps

**Mesh Modulation**
- Mesh Bandwidth: 10MHz, 8MHz, 7MHz, 6MHz, 5MHz, 3.5MHz, 3.0MHz and 2.5MHz modes
- Mesh FEC: 2/3
- Mesh Constellation: BPSK, QPSK, 16QAM (adaptive)
- Mesh Capacity: Maximum 14.6Mbps (TX/RX)
- MIMO Mesh Capacity: Maximum 25.0Mbps (TX), Maximum 12.4Mbps (RX)

**Video**
- Video Input: 2 video streams
- Max total throughput of 1920x1080p30-2 HD inputs at half resolution or frame rate

**Audio**
- Analogue Audio Input: High gain microphone mono
- Digital Audio Input: SD/HD-SDI 2 digital stereo pairs
- Sample Rate: 32kHz, 48kHz
- Coding Modes: 4 channels stereo or mono

**Data Interface**
- PTZ Control: Formats including VISCA and PELCO-D
- Data Input: 1k2 to 115k2, 7/8bit, no/odd/even parity RS232 or RS485
- Encryption: Type ABS 32bit as standard with SDRAPP-TX

**Streaming**
- Format: UDP Multicast/Unicast
- RTSP Multicast/Unicast
- ONVIF profile

**Control**
- Ethernet: Web GUI control and file download
- PC Application control and file download
- Access: User, Super User and Admin accounts

**Physical**
- Dimensions: L 235mm, W 100mm, H 26mm
- Weight: 950g

**Power**
- DC Input: 8V to 18V reverse polarity protected
- DC Output: 1A pass-through (switchable)
- Camera/Adapter Power: 5V regulated output limited to 1A (switchable)
- Typical Power Consumption: 12.5W (SD), 13.5W (HD), 14.5W (Dual)

**Environment**
- Temperature Range: -10 to +50 °C with additional cooling
- Humidity: Less than 85% Non-Condensing
- Cooling: External heatsink required for some modes
- Sealing: IP54
- EMC Conformance: CE marked

**Product Codes:**
Please see configurator table on the following page.

* Future development

Products are available to security users in licensed frequency bands. Encryption licences are subject to export control. These products are not approved for use by unlicensed users. Commercial products are available if used in appropriate licensed frequency bands.
SOLO8 Software Defined Radio (Plain)
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Export of Encrypted Products is Subject to United Kingdom Regulatory Export Controls

| Family: SOLO8 | Product: SDR |

DTC Sales Code

Please enter required codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Power Output</th>
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<tbody>
<tr>
<td>2x100mW</td>
<td>Dual 500mW transceiver</td>
</tr>
<tr>
<td>2x2W</td>
<td>Dual 2W transceiver</td>
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<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
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<tbody>
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<td>2048MHz</td>
<td>1.172-2.300GHz + 2.5GHz</td>
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Additional Frequencies (2.4G & UHF) to be released shortly. Other options may be available on request.

<table>
<thead>
<tr>
<th>Code</th>
<th>Encryption</th>
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<tr>
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<td>AES128 Encryption</td>
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<tr>
<td>AES256</td>
<td>AES256 Encryption</td>
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</tbody>
</table>

Software License Codes (Silver base level included in DOM)

- Silver: SDRAPP-ENC includes Audio, Data, Recording, Streaming
- Gold: Silver plus MPEG4 H.264 (2D)
- Platinum: Gold plus MPEG4 H.264 (HD)

- Silver: SDRAPP-TX includes Di/B-T, Telemetry
- Gold: Silver plus narrowbands 1.2GHz & 2.4GHz
- Platinum: Gold plus Ultra Extreme Narrowband 825kHz, Ultra Mobile Video Link (UMVL)

- Silver: SDRAPP-MESH includes MIMO IP Mesh (2G2)

Product Code Includes

CA002: SOLO8 VDC Power level Leuco-Grade 3M
CA023: Standard 12V power brick
CA2395: DIN 1.592 to BNC Female Cable x 2
SA3741: USB stick containing User Guide, DTC Device Controller and Integration Documentation

Compatible Products (sold separately)

SOLORX: SD Receiver
SOLOMV: Handheld 3G Receiver
SOLOMV: Tactical SD Receiver
PRORX: HD Receiver
PRORX: Dual HD Receiver
SOLOMN: Handheld HD Receiver
SOLOMN: Tactical HD Receiver
NETNode: 2W-3RD | Phase 3.2W IP Mesh Radio
NETNode: 2W-3RD | Phase 3.2W IP Mesh Radio
NETNode: MIMOR | MIMO 2W Robust IP Mesh Radio

Related Accessories (sold separately)

SOLAPP-3RD | Three button key fob (433-363-779MHz)
SOLAPP-3RD | Three button key fob (433-363-779MHz)
SOLRX: HDMI / Composite to SDI converter
CINT700HD: Pin-hole HD camera kit
AP000300: 820-860MHz SMA dipole antenna
AP000705: 1.5-2.5GHz SMA 1dB dipole antenna
AP000100: 2.0-2.6GHz SMA 2dB dipole antenna

Wide range of antennas available on request.

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