Design Features and Specifications:

**PHYSICAL**

- **Housing**: Aluminum back-housing, plastic front-housing, black with rubber frame
- **Dimensions (l x w)**: 8.4 x 13 in. / 214 x 330 mm
- **Mounting**: Landscape or portrait / Standalone / In-dash

**DISPLAY**

- **Type**: TFT Color Graphic LCD with LED backlight
- **Size (w x h)**: 12.1 in. / 261 x 163 mm
- **Resolution**: 1280 x 800 px (WVGA), 16:10
- **Colors**: 16.7 Million
- **Brightness**: 1000 cd/m²
- **Contrast ratio**: 750:1

**INPUT DEVICES**

- **Touch**: PCT
- **Indicators and sensors**:
  - Light sensor
  - 1 Multicolor-LED
  - 3 Status-LED’s

**ELECTRONICS**

- **Processor platform**:
  - CPU: NXP I.MX6®, quad core, 1GHz
  - RTC: Buffered by gold cap
  - Mass storage: 8GB
  - RAM: 1GB
- **Speaker**: 80 dB @ 1kHz in 1 m distance
- **Power supply**:
  - Operating voltage range: 9 – 36 V DC
  - Protection: Short circuit protection
  - Overvoltage resistance: 48 V for max. 5 minutes
  - Inverse polarity protection: Up to -48 V DC for max. 5 minutes
- **Current consumption (without external load), max.**:
  - Power mode:
    - Current at 13.5 VDC: ≤ 1.8 A
    - Current at 27 V: ≤ 0.7 A
  - Low-power: Depending on config
  - Sleep: ≤ 0.2 A
  - Off: ≤ 2 mA
  - Current at 27 V: ≤ 0.7 A
  - Current at 13.5 VDC: ≤ 1.8 A
  - Current at 27 V: ≤ 0.7 A
  - Current at 13.5 VDC: ≤ 1.8 A
  - Current at 27 V: ≤ 0.7 A

**INTERFACES**

- **CAN Bus**:
  - 2 x CAN-Interfaces
  - ISO 11898, CAN-specification, 2.0 B active
  - Up to 1MB (250KB, 500KB, 750KB and 1MB)
- **RS-232**:
  - 1 x RS232-Interface
  - Type: EIA232 (only RxD, TxD, GND)
  - Speed: Max. 115 Kbps
- **USB**:
  - Main connector: 1 x High speed
  - Inputs: 4 configurable analog/digital inputs
    - Input impedance: > 3k Ohm
    - Resolution: 12 bit (1024 digits, 1 digit = 3 mV)
    - Input range: 0-12 V or 4-20 mA, or 0-20 mA
    - Max. protectable input voltage: 36 VDC
    - Protection: Short circuit protection
    - Frequency: Max. signal frequency 50 Hz
  - Outputs: 3 digital outputs
    - Short circuit protection: Up to 36 V
    - Imax 300 mA open drain at 12 V
    - RDS on < 1 Ohm
    - RDS off > 100 kOhm
- **Video-Interface**:
  - Inputs: 3 x analog (2 live steams)
  - Camera supply: 12 VDC
  - Output: 1 x camera control output
    - (open drain) for special functionality
    - (mirror, shutter, heating etc.)
    - Vss : 1 V
    - Max. current: 500 mA
    - Ampacity 300 mA
- **Ethernet-Interface**:
  - 1 x 10/100MB Base
- **Audio**:
  - 1 x Audio output (left, right, GND)
  - Output power: approx. 65 mW @ 32 Ohm

Off-the-shelf unlocked features include Guidelines, Tasks, ISO-UT, and TAP Market. All additional Horizon OS features are easily accessible and unlockable utilizing TAP via the console or personal device.

Coupled with Topcon receivers, steering control, and correction services; the new level of customization provides flexible guidance solutions, priced right. Plus, with the complete Horizon OS feature-set including compatibility with the full-range of Topcon sensors and application control technology, the XD+ is ready for even the most progressive operations.
## XD+ Console

### Connectors
- **Main**: Tyco-AMP 3-1437290-7
- **Video**: M12 round connector, female, 5-pole, B-coded acc. to EN 61076-2-101
- **Ethernet**: M12 round connector, female, 4-pole, D-coded acc. to EN 61076-2-101

### Software
- **Operating System**: Linux Kernel
- **Application Programming**:
  - OPUS Projector
  - ISO-UT

### Testing and Verification
- **CE-Compliance**: EU Directive 2014/30/EU (EMC) according to
  - EN ISO 13766-1: Earth-moving and building construction machinery
    - Electromagnetic compatibility (EMC) of machines with internal electrical power supply
  - EN ISO 14982: Agricultural and forestry machinery
    - Electromagnetic compatibility
  - Test methods and acceptance criteria
- **E1 – Type approval**: EU Directive ECE R 10
- **Protection Level (IP Code)**: IP65 and IP66 according to ISO 20653: Road Vehicles
  - Degrees of protection (IP-Code)
  - Protection of electrical equipment against foreign objects, water and access
- **Electrical**:
  - 12 and 24 V – Systems according to:
    - ISO 16750-2: Road Vehicles
    - ISO 15003: Agricultural Engineering
    - Environmental conditions and testing for electrical and electronic equipment
    - Electrical loads
  - ISO 16750-3: Road Vehicles
    - ISO 15003: Agricultural Engineering
    - Environmental conditions and testing for electrical and electronic equipment
    - Mechanical loads, Code L
    - Mechanical Shock: Level 2
    - Random Vibration: Level 2
    - Sinusoidal Vibration: Level 2
- **Mechanical**:
  - ISO 16750-4: Road Vehicles
    - ISO 15003: Agricultural Engineering
    - Environmental conditions and testing for electrical and electronic equipment
    - Climatic Loads
    - Operating Temperature Range:
      - Operating Temperature Range: -30ºC to 65ºC
      - Storage Temperature Range: -40ºC to 85ºC
    - Electrical and electronic equipment
    - Testing resistance to environmental conditions
- **Climate**:
  - ISO 16750-5: Road Vehicles
    - ISO 15003: Agricultural Engineering
    - Environmental conditions and testing for electrical and electronic equipment
    - Testing resistance to environmental conditions

### Complementary Products
- **Rooftop Receivers**: AGM-1 manual guidance
  - AGI-4 receiver/steering controller
- **Steering Control**: Retrofit steering solutions (AES-35 and Danfoss EHI Steering Valve)
- **Correction Services**: Full range through base stations (HiPer VR and MR-2) and reference station networks (TopNET)
- **Cloud Connectivity Devices**: CL-10 and CI-55 for automatic data upload to TAP
- **Tilling, Seeding, Crop Care Control**: Leading tilling, seeding, planting, spraying, and spreading control
- **Crop Health Monitoring**: Nutrient sensor for optimized and on-the-go application
# XD+ Console

Pay only for what’s needed. Explore all XD feature unlocks below.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>XD+ (Customizable)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Guidance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines</td>
<td>*Basic guidance, including on-screen waylines and lightbar.</td>
<td>Included</td>
</tr>
<tr>
<td>Autosteer</td>
<td>*Automatic steering included with 30 cm SBAS correction services. Access to full range of correction networks, including satellite, cellular, Wi-Fi and base station, down to 2 cm RTK.</td>
<td>Unlock</td>
</tr>
<tr>
<td>Headland Turns</td>
<td>Automatically generate and execute turn at end of row for seamless transition into next pass.</td>
<td>Unlock</td>
</tr>
<tr>
<td>Tramlines</td>
<td>Visualize and optimize waylines with respect to application machinery width.</td>
<td>Unlock</td>
</tr>
<tr>
<td>Controlled Traffic</td>
<td>View multiple guidance paths (up to 20) at the same time with operating waylines easily differentiated from surrounding tasks.</td>
<td>Unlock</td>
</tr>
<tr>
<td>Machine to Machine***</td>
<td>*Collaborate multiple machines (up to 100) on a single task and share data in real time. Includes integrated automatic section control to prevent accidental application.</td>
<td>Unlock</td>
</tr>
<tr>
<td>XTEND</td>
<td>*Extend user interface of console to mobile iOS or Android device.</td>
<td>Unlock</td>
</tr>
<tr>
<td>Cameras</td>
<td>*Enable display for digital cameras (up to 4 AgCams).</td>
<td>Unlock</td>
</tr>
<tr>
<td>Third-party NMEA Receivers</td>
<td>Support for third-party NMEA and NMEA 2000 receivers to provide GNSS position information to the console.</td>
<td>Unlock</td>
</tr>
<tr>
<td>External Applications</td>
<td>Enable display for Topcon approved third-party software applications.</td>
<td>Unlock</td>
</tr>
</tbody>
</table>

| **Digital Farm Management** | | |
| Tasks | Task management including data logging and full stack of geospatial field profiling tools. | Included |
| TAP Fields** | Easily manage subscriptions, upload and manage all farm data. Includes Market, Dashboard, Storage and Fields apps. | Included |
| TAP Pro | *Constant connectivity, enabling Automatic Sync, Fleet Management and Remote Support. | Unlock |
| Weather Station | *Enable display for AirMar 150WX Weather Station. | Unlock |
| CropSpec Monitoring | *Enable display for CropSpec Crop Monitoring solution. | Unlock |
| Yield Monitoring | *Enables display for Topcon real-time yield monitoring, mapping and logging solution. | Unlock |

| **Implement and Application Control** | | |
| Auto Section Control | *Automatic section control for compatible application controllers. | Unlock |
| Variable Rate Control | *Variable rate control for compatible application controllers. | Unlock |
| Additional Seeder Tanks | *Adds support for seeder implements with 3 or more tanks. | Unlock |
| Additional Spreader Bins | *Adds support for spreader implements with dual belts and up to 4 bins. | Unlock |
| Additional Sprayer Tanks | *Adds support for sprayer implements with up to 4 tanks. | Unlock |
| Boom Height Control | *Enable display for Norac boom height control solution. | Unlock |
| Hypro ProStop-E | *Support for Hypro Pentair CAN controlled nozzle system to provide individual nozzle control on the boom. | Unlock |
| Water Conservation | *Enable display for access to full suite of Topcon landforming technology, including survey, design and execution. | Unlock |

| **ISOBUS Control** | | |
| ISO-UT | Display compatibility for ISOBUS protocol solutions. | Included |
| ISOBUS Implement Profiles | *Enables display for ISOBUS implement control and task logging, up to 2 products. | Unlock |
| Additional ISOBUS Products | *Adds support for up to 4 ISO products. | Unlock |

*Additional hardware required.  **TAP Fields is only free for first year.  ***Future release.