

## Ultralink™ to Ultrawire™ Cross-over (XTU)

The XTU Downhole Controller is a communications interface between logging tools operating on the Ultrawire™ toolbus and Ultralink™ telemetry system.

### Description

The XTU is an intelligent bridge between the Ultrawire™ toolbus and Ultralink™ telemetry system; acting as both a communications interface and a programmable logging controller. It also incorporates a DC-DC converter (switch mode power supply) to convert the high voltage on the Ultralink™ line to power the Ultrawire™ toolbus. In its capacity as a logging controller, the XTU polls each tool in the toolstring for its data packet, assembling all packets into data frames for transmission to the surface acquisition system. By default, the polling program is automatically generated and executed by the XTU, making logging a very simple process. The polling programme can be modified by the logging engineer.

### Features

- Automatic "plug and play" configuration and start-up.
- Selectable Ultralink™ bit rate to suit varying demands & conditions.
- Detailed toolbus error detection and logging to facilitate fault finding.
- Facility to monitor the head voltage and internal temperature of the XTU.
- Automatic transmission of the toolstring configuration to the surface system.
- Automatic downlink failure detection triggers reversion to default bit rate.
- Automatic generation of a default polling program that enables all the identified tools to share the available bandwidth on the wireline.

### Specification

Model	XTU002	XTU004
Temperature rating	350°F (177°C)	
Pressure rating	15,000psi (103.4MPa)	
Tool diameter	1 <sup>11</sup> / <sub>16</sub> in (43mm)	1 <sup>3</sup> / <sub>8</sub> in (35mm)
Tool length	20.4in (517mm)	23.73in (603mm)
Tool weight	7.5lbs (3.4kg)	6.16lbs (3kg)
Supply voltage	+180 to +300VDC	+120 to +300VDC
Supply current (depends on toolstring)	20mA (no load)	
Max. number of tools supported	62	
Ultrawire™ toolbus data rate	500kbits/s	
Ultrawire™ toolbus current (max)	1.5A continuous	800mA
Ultralink™ uplink data rates	50, 71, 100 & 143kbits/s	
Ultralink™ downlink rate	300bits/s	
Upper connection	1 <sup>3</sup> / <sub>16</sub> UNF female thread with 4mm single pin	
Lower connection	1 <sup>3</sup> / <sub>16</sub> UNF male thread with 4mm single socket	
Materials	Corrosion resistant throughout	

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