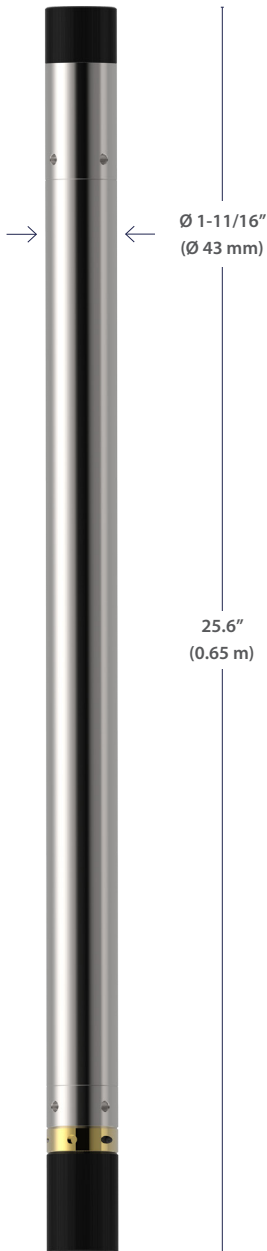




PEGASUSSTAR HIGH SPEED TELEMETRY (WTS43C-C)

The **Telemetry** tool supports all GOWell's Pegasus series tools via a common power bus and CANbus2.0 inter-tool communications. The telemetry system is fully configurable from surface and future proof as adding new tools is easily achieved by software configuration.



WTS43C-C

FEATURES

AUTO-CONNECT

After power-up, the PegasusStar telemetry will automatically connect and establish communications between surface and downhole. There is no setup or configuration necessary – the engineer can just focus on logging. Front panel LED and software GUI provides immediate feedback on the connection status. Link speed and all status information is reported via warrior.

SELF-ADAPTING

PegasusStar will automatically adjust to the maximum uplink speed supported by the wireline cable and conditions. The system's automatic noise suppression reduces any interference.

HALF-DUPLEX

Uplink is based on Digital Multicarrier Modulation (DMM) technology and downlink is based on Alternative Mark Inversion (AMI). By applying Time Division (TD) technology the telemetry achieves half-duplex communications, where downlink commands don't interfere with the high-speed uplink signaling.

SPECIFICATIONS

	WTS43C-C P/N 100507897
GENERAL SPECS	
Maximum Pressure	15,000PSI (103MPa)
Maximum Temperature	350°F (175°C)
Telemetry Speed (Typ)	Uplink 200Kbps@22kft (7Km), Downlink 200bps @22kft (7Km)
Bit Error Rate (BER)	≤ 10 ⁻⁷
Tool Bus	CAN-Bus2.0 @ 1MHz
Tool Outside Diameter	1-11/16" (43 mm)
Tool Length	25.6 in. (0.65 m)
Tool Weight	10 lbs (5 kg)
Head Voltage	160-360 Volts (Typically 200 Volts) DC
Tool Bus Current	1 A Continuous
Telemetry Measurements	Cable-Head Voltage, 3-Axis Acceleration, Internal Temperature



PEGASUSSTAR SURFACE PANEL (CSS107)

PegasusStar is GOWell's latest generation cased-hole logging platform, consisting of a highly capable and fast telemetry sub for surface-readout (SRO) operations and comprehensive memory recording system. The platform is compatible with a wide range of GOWell's Pegasus series downhole tools and the industry leading Warrior 8 software.

For e-line applications PegasusStar consists of a 1U surface panel and a compact downhole telemetry tool. The high-speed intelligent telemetry system is self-adaptive and "hands-free" for the engineer allowing operation on a wide range of mono-conductor wireline cable types and lengths. It typically achieves 200kbps but is capable of exceeding 400kbps.

The 1U PegasusStar **Surface Panel** incorporates an API-RP67 compliant cable interface with key-lock safety switch. The panel handles all downhole communications with the telemetry tool including automatic self-adapting on power-up. Connection with the logging computer is via Ethernet either over LAN or WiFi connections.

The panel also includes depth encoder and line tension inputs that are compatible with a range of encoders or hoist panels. The panel's bypass mode allows for use with your existing logging systems.

FEATURES

From left to right on the front of panel there is a system fuse and power switch. Test points allow for access to signals.

The main key switch controls the functional modes as follows:

- **Bypass:** Pass-through of the wireline cable
- **Log:** PegasusStar telemetry mode
- **Safe:** Wireline cable is grounded, key can be removed and power is off
- **Perforate:** Allows for perforating when used in conjunction with GOWell perforating module



CSS107

SPECIFICATIONS

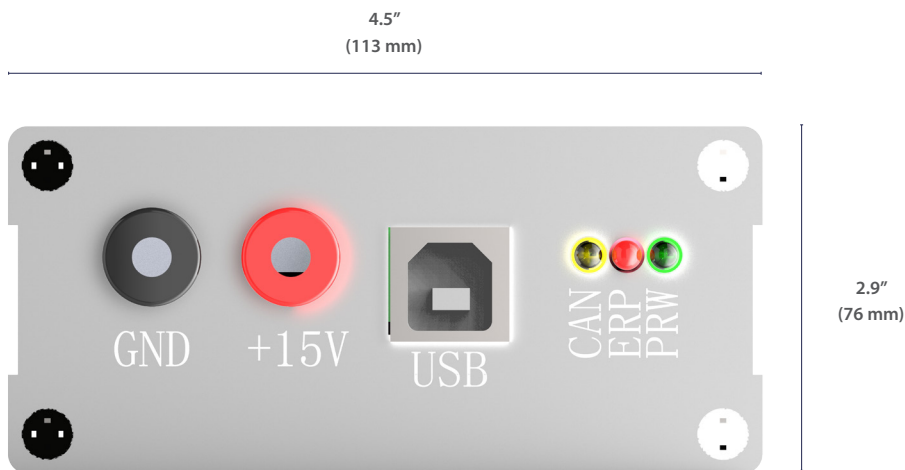
	CSS107 P/N 100508402
GENERAL SPECS	
Dimensions	1u 19 in. Width Rack
Power	120-240 Volts AC 50/60 Hz
Depth	Quadrature Pulses Encoder
Tension	Analog (Volts)
PC Communication	Ethernet TCP/IP
Downhole Communications	Full Duplex DMM and AMI
Downhole Power	External DC Power Supply



PEGASUSSTAR CAN-USB BOX (MRL.GJ5)

The **CAN-USB Box** provides a cost effective solution for in-house maintenance, calibrations and benchtesting activities without the need for full system hardware set up. Using Warrior 8 interface and the **CAN-USB Service mode**, the system provides both real time display of the live data, as well as the ability to record on time.

The **Box** converts Gowell's Standard CAN 2.0 protocol into USB 2.0 protocol for data handshake with PC and Warrior. The **Box** is used in conjunction with GOWell's diagnostic software to flash firmware, program configurations and perform tool diagnostics.



MRL.GJ5

SPECIFICATIONS

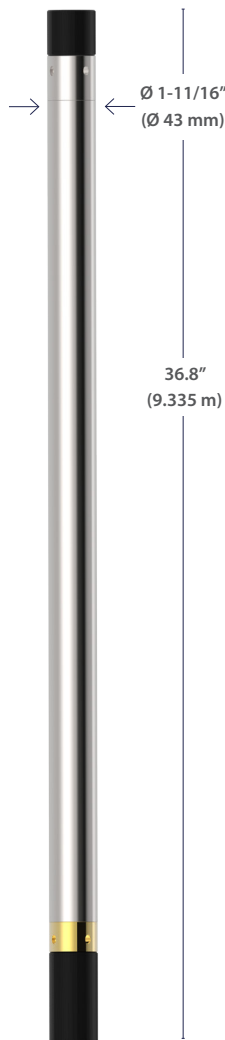
MRL.GJ5	
P/N 100505439	
GENERAL SPECS	
Dimensions	4.5x2.9x1.4 in. (113x76x35 mm)
Power	USB 5 Volts
PC Communications	USB 2.0
Downhole Communications	GOWell CAN 2.0
Downhole Power	External Power Supply



PEGASUS STAR MEMORY CONTROLLER (MRL43C-C)

Memory system can be run on slick-line or coiled tubing to acquire and store data from GOWell's Pegasus Series tools. The **Memory Controller** is programmed and data downloaded directly through USB using Warrior™ 8 Memory Logging Software. The **Memory Controller** will acquire and store data in accordance with a user defined 'schedule'. This schedule controls tool in and out of sleep mode, each sensor sampling rates and tool commands such as open/close caliper arms. The system supports a wide range of Time-Depth Recorders including the SLAB panel from SDS-Warrior or other panels such as EzTek's EzPod and Benchmark slickline hoist panel. These slickline acquisition panels are used to acquire Time, Depth, and Tension data.

Warrior Memory Logging Software is available as a standalone package for running GOWell memory tools or as an upgrade to existing Real-Time CH Warrior V8 licenses. Warrior for Memory V8 provides Multi-window interface for programming tools and downloading data, together with capabilities for processing logging data.



MRL43C-C

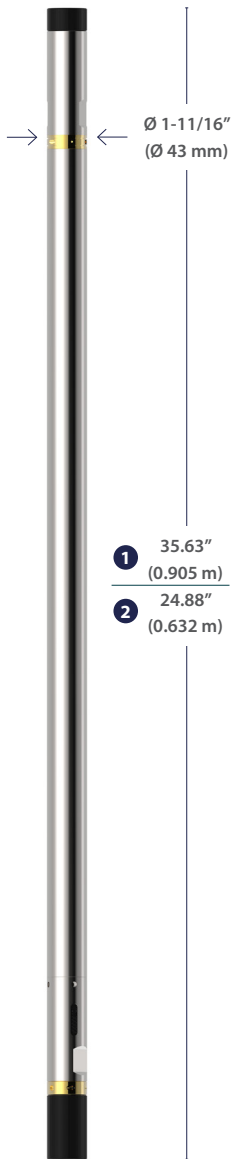
SPECIFICATIONS

		MRL43C-C P/N 100505819
GENERAL SPECS		
Maximum Pressure	15,000PSI (103MPa)	
Temperature Range	-4°F ~ 350 °F (-20°C ~ 175°C)	
Tool Outside Diameter	1-11/16" (43 mm)	
Tool Length	36.8 in. (9.335 m)	
Tool Weight	10 lbs (4.5 Kg)	
Current	50mA (logging), 10mA (idle)	
Internal Measurements	3-axis acceleration, internal temperature	
MEMORY		
Memory Capacity	8 Giga Bytes	
HARDWARE FEATURES		
Working Voltage	18V to 36V	
Working Current	Active: 23 mA ± 5mA Idle: 13 mA	
SIGNAL TRANSMISSION MODE		
Transmission Mode	With Surface System	USB 2.0
	With Downhole Tool	CAN-Bus 2.0 @ 1MHz
Maximum Download Data Speed	10 MBytes/sec	



PEGASUSSTAR BATTERY PACK UNIT (BPU43C)

The **BPU** contains a lithium battery pack. This unit serves as the power supply for GOWell's production logging tool strings. Two sizes of **Battery Pack Unit (BPU)** are available to house regular and extended capacity Li battery packs. GOWell's **BPU** are compatible with commonly available Li battery packs from vendors such as Stealite, Spectrum, Excell and others.



BPU43C

SPECIFICATIONS

	BPU43C-D	BPU43C-E
	P/N 100504392	P/N 100507360
GENERAL SPECS		
Maximum Pressure	15,000PSI (103MPa)	
Maximum Temperature	350°F (175°C)	
Tool Outside Diameter	1-11/16" (43 mm)	
Length	① 35.63 in. (0.905 m)	② 24.88 in. (0.632 m)
Battery Pack	5*CC (Compatible with BAT-010)	5*C (Compatible with BAT-009)
Battery Capacity	13 Ahr	6 Ahr

Cased Hole

PegasusStar

Battery Pack Unit (BPU43C)