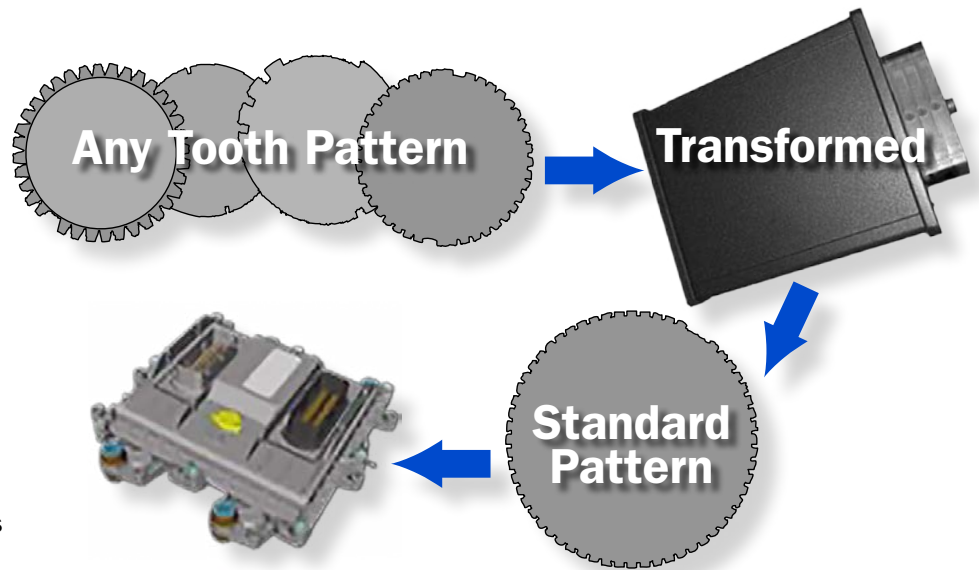


Cam and Crank Converter BOT™ (C-BOT) Tracking Module

Description

Southwest Research Institute's® (SwRI®) Converter BOT™ (C-BOT) element is a flexible engine position tracking module designed specifically to translate arbitrary cam and crank patterns into OEM patterns. Featuring a dual-channel VR signal conditioner and Xilinx® FPGA, the C-BOT may be configured by SwRI engineers to accommodate any standard or custom pattern. The C-BOT operates on standard (12V) vehicle power, and outputs 5V signals supplying up to 24 mA.



Features

Multiple inputs

- Dual variable reluctance or Hall effect sensor inputs
- Arbitrary cam and crank patterns

Predictive position estimation

- Resolution ~1/10th crank angle degree (CAD)
- Linear approximation between tooth edges
- Higher-order approximation optional

12V DC powered

Test cell and vehicle mountable

Environmentally sealed

- Water-resistant enclosure
- Heavy-duty 40-pin Deutsch® DRC connector
 - Mates with included Deutsch® plug

Multiple digital outputs

- Crank
 - Arbitrary pattern output
 - Arbitrary duty cycles (CAD-based)
 - Customized missing tooth locations
- Cam
 - Arbitrary pattern output
 - Arbitrary duty cycles (CAD-based)
 - Single or multi-pulse per 720-CAD
 - Custom widths (CAD-based)
- Optically Isolated
 - Available for inputs and outputs

Each device in SwRI's BOT series may be configured to meet specific customer needs. The potential for these devices far exceeds their generic configurations.