

WAY™

designed and developed by:
FIKO
GROUP OF COMPANIES

WORLD NAVIGATION PRODUCTS

HORIZON 60

Your MEMS Digital Gyro compass with GPS

High performance SiRF Star III GPS receiver

(20 channels, L1-C/A code, DGPS EGNOS/WAAS, WGS84, NMEA)

Magnetic North MEMS Digital Compassing

(360° magnetic North with 1° resolution)

Attitude Reference

(±60° Roll and Pitch - tilt compensated)

15Hz response time

(faster updates compared with gimbaled or mechanical fluxgate compasses)

uFDEX network and communication protocol

(uses uFDEX intelligent data communication between WAY and other products)



μFDEX BUS SYSTEM® as option

Copyright© 2005/06 by Fiko software Co., Ltd. Moo 5, CMPEG Technology Square 1, Tamboon San Sai, Ampoe Phrao, Chiang Mai 50190 - Thailand - MANUFACTURED ON LICENCE IN FRANCE - EU

THE WAY HORIZON 60

The WAY HORIZON 60 from FIKO is a digital compassing solutions that provide heading and GPS information to be used in navigation and guidance systems. HORIZON 60 uses compact state-of-art GPS and MEMS Gyro technology specially designed for satellite navigation combined with attitude and heading information for general purposes, Marine Compassing and Navigation, Unmanned Vehicles Navigation, Attitude Reference, Satellite antenna Positioning and Levelling, Platform Levelling, Dead Reckoning, Surveying Applications and more.

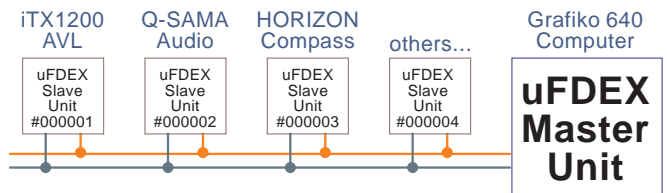
WHERE ARE YOU?

WAY HORIZON 60 provides precise GPS location information to be used in any map software capable to read NMEA GPS protocols. The combination of MEMS technology for compassing and tilt gives you a unique compact low-power unit for any needs within engineering, navigation or surveying where "WAY" stands simply for "Where Are You?".

uFDEX AT YOUR RESCUE

uFDEX was developed by FIKO for the single reason to give its users more flexibility when it comes to integration, communication and liability in connecting several navigational and related products together. Keywords for uFDEX success is RS-232/USB integration as each unit may act as MASTER or SLAVE in a uFDEX network that may also connect to CAN-bus, RS-422, RS-485, Bluetooth or Wi-Fi.

uFDEX data are treated as an additional command set to the original communication data stream like i.e. the NMEA strings sent from the GPS receiver, so such data are still available for you to use and will work with, and not effect your GPS/NMEA software.



uFDEX module diagram

Each uFDEX HUB can connect maximum 8 uFDEX devices to one COM-port like i.e. RS-232 or USB* but a total of 16,777,215 units can be addressed under the complete uFDEX system.

READY TO GO?

The WAY HORIZON 60 is ready to go for the NMEA GPS protocols, but since most MEMS Compasses and tilt sensor products require specific data packets, you would need to integrate this to your software to make it work. To help software developers, FIKO provides a highly reliable and fast Direct Memory Access-based DLL that handles such information through RS-232 COM-ports.

* Requires i.e. FIKO's iUSB to RS-232 converter

THE WAY IT SHOULD BE

Just 75 gram
measuring only 37x52 x21mm

WAY HORIZON 60 application software

Most navigational software developers for marine or other applications have no or little knowledge in developing MEMS-based products with microcontroller technologies. To fill this gap, FIKO has developed several such products that are not only easy to use and to implement into software, but our policy is also to provide low-cost products also aimed for OEM. Horizon 60 is no exemption and if you require protocol documentation or DLL to test this product in your own developments, please feel free to ask for it.

The HORIZON 60 may be used in and together with many kind of applications, ranging from marine and aviation navigational software to engineering work within GPS location, distance measuring, levelling and bearing measurements. With the HORIZON 60, you will have access to all latest technologies within digital measuring information that can be easily be integrated into any windows, DOS or embedded software.



GNSS-TECH Primary Flight Display

If you need fast and easy developments and integration, you may use our DLL that will not only provide you with fast and easy access to COM-ports, but also to all navigational, compass, roll and pitch data available from within this ruggedised, small and compact unit.

If you require assistance with software and or hardware developments, please feel free to contact us for a quote at contacts@fikogroup.com

GNSS-TECH Q12 Series are also using the low-cost HORIZON 60 integration as an option to AHRS for experimental (Ultralight) and non-certified aircraft.

MEMS TECHNOLOGY

Micro Electrical Mechanical Systems ("MEMS") are small devices and machines, which uses fabrication methods and techniques generally used in silicon microelectronics to develop moving parts linked to electrical logical or analogue components.

HORIZON 60 uses such microscopic devices with both electrical and mechanical functionality to overcome its unique micro sizes and lightweight.

Because of the compact size and the use of our aluTECH aluminium casing, you will in fact find it extremely easy to use and install.

TECHNICAL SPECIFICATIONS

MEMS COMPASS - HORIZON 60	GPS SiRF StarIII
1° heading accuracy	Receiver 20 channel All-In-View
0.1° resolution	L1 1575.42 MHz C/A code 1.023 MHz
0.5 degrees repeatability	Accuracy 10m
±60° tilt range for roll and pitch	EGNOS/WAAS accuracy 1 to 5m
Embedded hard iron calibration	Datum: WGS-84
15Hz response time	Snap start < 3 sec. average
Combined data output	Hot start < 8 sec. average
AHRS in ASCII format	Warm start < 38 sec. average
RS-232 Output (USB option)	Cold start < 45 sec. average
Normal Operation -20°C to +70°C	Altitude max 18,000m or 60,000 feet
Input voltage +8 to +26 VDC	Velocity max 515m/sec. or 1,000 Kts.
aluTECH casing 37x52x21mm	Protocols: NMEA-0183
Long lasting anodised casing	- SiRF binary (NMEA Standard)
Low weight - 75g (2.65 ounces)	Crystal oscillator (TCXO)

WAY HORIZON 60 is maybe the world smallest, most flexible and most compact GPS/GYRO system available? With it's just 75 Grams or 2.65 ounces, it's defiantly light.

This compact unit may be used in Marine, UMV's, for geo-referencing, MEMS COMPASS with ROLL, PITCH and GPS navigation, engineering and more...



HORIZON 60

www.gnss-tech.com - contacts@fikogroup.com