

# HANATECH IM 2400 4/5 GAS ANALYSER

*IM 2400 4/5 Gas Analyzer*

## **ULTRAGAS Combo**

Brings together a synergy of gas analyser and scan tool technology which outdates the big tune scopes of the past



### **A completely new COMBO concept**

- Remote control via Ultrascan/Multiscan
- Highest quality - Andros 6800 5-gas micro bench
- A true combination of a scan tool and a gas analyzer

### **On-board Drive Tests**

- Realtime Datalink with Ultrascan/Multiscan scan tool
- Records gas readings up to 1,500 frames
- Direct PC Interface



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HANATECH AUSTRALIA  
[www.autoequipment.com.au](http://www.autoequipment.com.au)  
email: [sales@autoequipment.com.au](mailto:sales@autoequipment.com.au)

# SPECIFICATIONS

CPU	Motorola 68HC
Key input	16 Rubber keys
Measurable ranges	Hydrocarbon(HC) : 0~10,000 ppm
	Carbon monoxide(CO) : 0~10%
	Carbon dioxide (CO2) : 0~20%
	Oxygen (O2) : 0~23%
	Lambda : 0.5~2.5, AFR :0~99.9
	Nitric Oxide (NOx) : 0~5000 ppm "Optional"
Display	320 X 240 LCD with back light
Measuring Device	Co, Co2, HC : Non-dispersive infrared O2, NOx : Electro Chemical
Warm-up time	4~6 minutes
Accuracy	+ -2% of Full Scale
Response	90% within 10 seconds
Reliability	Less than 3% / in 30 minutes
Continuity	Less than 2% / 5 serial operations
Calibration	Automatic in-use zeroing and calibration using reference gas
Operating condition	Temperature : -10°C ~ 40°C, Humidity:Less than 0% RH
Drain	Automatic water drain
Power	AC 100~230V 50~60Hz / DC 12V 8A.
Probe and hose	7.8 meter long : Hose 7.15m, probe 0.65m
Dimensions	H220mm - 270mm - L550mm
Weight	9.2Kg Analyzer main unit only
Print	HP printer in PCL mode or mini printer "Optional"
Communication mode	RS232C
Purge	Automatic / Manual

## Gas Analyzer

The gas analyzer boasts its highest quality, accuracy and reliability - **Andros 6241** inspection level gas bench.

Affordable basic 4-gas analyzer that is upgradeable to a 5-gas analyzer with an optional NOx kit.

Advanced LCD display: User friendly menu selections and on screen instructions.

Simple Lambda - AFR conversion.

Windows based PC interface program provides more comprehensive and professional diagnosis.

Internal thermal print – Optional.

## Combo

### Remote Control Mode

Ultrascan <sup>Plus</sup> or Multiscan works as a remote control module for the gas analyzer.

You can view gas readings on your scan tool screen and control the overall operation of the gas analyzer Combo Mode

Gas readings are presented as a part of scan tool diagnostic live data simultaneously.

Combining two independent diagnostic tools into one brings about great synergy of monitoring both scan tool data and gas readings simultaneously, which enables a thorough diagnosis of 'cause and effect'.

Combo concept is designed for accurate mobile on-vehicle road testing at affordable costs. You can record both data while performing drive test during the drive test using Ultrascan <sup>Plus</sup> /Multiscan's unique Black Box Flight Record function.

Combined scan and gas data can easily be downloaded to a PC by using Ultrascan Plus/Multiscan's featuring USB realtime PC interface function for intensive diagnostic viewing, printing comprehensive diagnostic reports, generating invoice reference and compiling a personal diagnostic reference library.

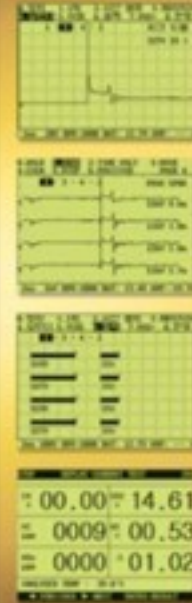


# ULTRASCAN<sup>plus</sup>

Scan tool which mirrors OEM functionality



- Live data
- Activation Test
- Parameter Reset
- Key Coding
- Blackbox flight record
- ECU simulation
- Digital Multimeter
- 4 Channel Oscilloscope
- Ignition Pattern Analyzer
- Gas Analyzer interface
- USB direct PC interface
- CAN protocol enabled onboard



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## Specifications

### Internal Memory : 1 MByte SRAM

Memory Card : 128Mbyte NAND Flash memory

LCD : 320 240 Graphic LCD with backlight

Input Device : Membrane keypad

Quality system : ISO9141-2 and QS9000 certified

EMC compliance : CE / C-tick / FCC approved

## Scanner Functions

### - **Asian Cars**

Toyota, Lexus, Honda, Acura, Mitsubishi, Nissan, Infiniti, Mazda, Subaru, Suzuki, Isuzu, Daihatsu, Hyundai, GM-Daewoo, KIA, Samsung, Ssangyong

### - **European Cars**

Mercedes Benz, BMW, Volkswagen/Audi/SEAT/Skoda, Opel/Vauxhall, Ford, Renault, Peugeot, Saab

### - **American Cars**

GM, Ford, Chrysler

### - **Australian Cars**

Holden, Ford

### - **Latin American Cars**

GM-OPEL

### - **Malaysian Cars**

Proton, Perodua

**CAN** enabled onboard and ***Generic OBD2*** and ***EOBD*** compliant

## Special Functions

### **Oscilloscope**

**Four channels** Displays up to 4 scope graphs at one time.

### **High-speed digital scope**

Sampling Rate 500Khz.

### **19 pre-setup sensor selection**

Auto setup, Standard Pattern presentation

### **HOST-PRO Realtime PC Interface**

View waveforms by PC screen through USB

## Ignition Pattern Analyzer

### **Primary & Secondary Ignition Pattern (Conventional and DLI/DIS engine)**

#### **Display Mode**

Individual Waveform - Single pattern for individual cylinder

Parallel Waveform - Up to 6 cylinders

Peak voltage bar graph display (up to 8 cylinders)

Battery Voltage, dwell angle, spark time indication

#### **HOST-PRO Realtime PC Interface**

View ignition patterns by PC screen through USB

## Digital Multimeter

**Dual Channel Voltage Meter** : DC 30V

**Frequency Meter** : 1hz~100Khz

**Duty Cycle** : 0~99.9%

**Current Meter** : 0±128A (Optional)

## Emission Analyzer Interface

Real-time interface with IM-2400 Ultra 4/5 gas analyzer that enables simultaneous display, record and replay of scanner data and gas readings.

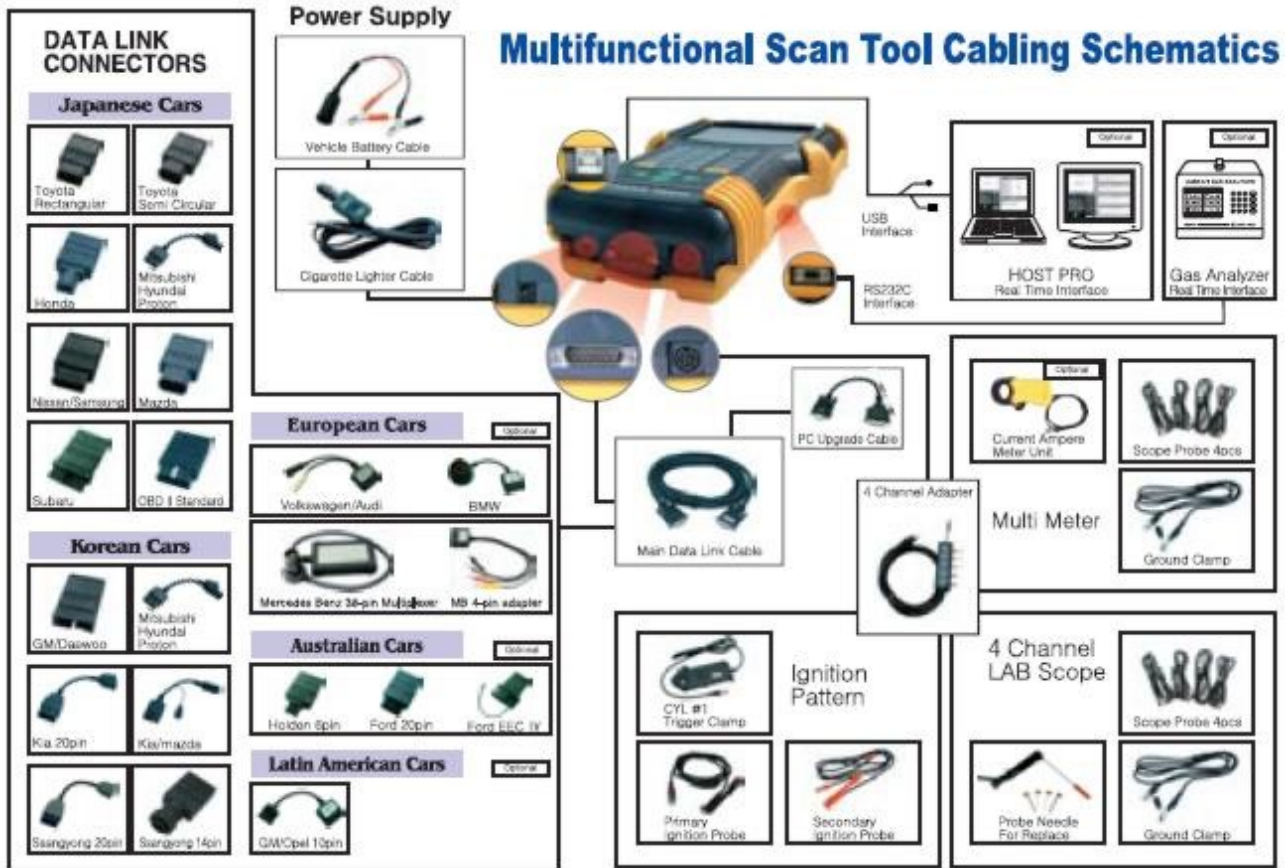
**Reliability** - Andros® 6241 inspection level gas bench.

#### **Business Solution**

A solution for countries with I/M program and regulations.

# ULTRASCAN <sup>PLUS</sup>

# ULTRASCAN PLUS



## ULTRASCAN PLUS

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email: [sales@autoequipment.com.au](mailto:sales@autoequipment.com.au)

# MULTISCAN<sup>Plus</sup>

Introducing the latest technology to the independent workshops

A high quality compact scan tool that mirrors original factory equipment, manufactured using Hanatech's 16 years of scan tool experience.

Boasts all the features and fully functioning software of more expensive units:

Super fast communication speed,  
Full size 320X240 backlit screen,  
Big 128MB flash memory,  
Realtime PC interface through USB,  
LED communication check lights  
Gas Analyzer interface

CAN protocol enabled onboard

Extensive Coverage with OE level functionality for both OBD1 and 2 generation vehicles:

- American  
GM and Ford  
(Chrysler to be released in 2005)
- Asian  
Toyota, Lexus, Honda, Acura, Nissan,  
Infiniti, Mitsubishi, Mazda, Hyundai, Kia,  
Subaru, Suzuki, Isuzu, Daihatsu,  
Daewoo, Ssangyong, Samsung
- European  
Mercedes Benz, BMW, Volkswagen /  
Audi / SEAT / Skoda, Opel / Vauxhall,  
Renault, Peugeot, Saab, Euro Ford
- Regional local manufactures  
Australian Holden, Ford  
Malaysian Proton, Perodua  
Latin American GM Brazil
- Generic OBD2 and EOBD



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*Extensive*

**Asian Cars**

Toyota, Lexus, Honda, Acura, Mitsubishi, Nissan, Infiniti, Mazda, Subaru, Suzuki, Isuzu, Daihatsu, Hyundai, GM-Daewoo, KIA, Samsung, Ssangyong

**European Cars**

Mercedes Benz, BMW, Volkswagen/Audi/SEAT/Skoda, Opel/Vauxhall, Ford, Renault, Peugeot, Saab

**American Cars**

GM, Ford, Chrysler

**Australian Cars**

Holden, Ford

**Latin American Cars** GM-OPEL

**Malaysian Cars** Proton, Perodua

**CAN** enabled onboard

**Generic OBD2** and **EOBD** compliant

*Complete*

**Multiscan<sup>Plus</sup>** features multi range control system coverage - ABS, SRS, ETS, Climate control, ECM, PCM, Immobilizer, Cluster and much much more.

Supports extended functions such as activation, reset basic settings, adaptation, repair guide, etc.

*Flexible*

**Multiscan<sup>Plus</sup>** provides realtime PC interface and Windows based click-and-go software update through USB.

**Multiscan<sup>Plus</sup>** is also designed to support CAN communication, the future communication protocol, is here now and users can take comfort from Multiscan's longevity.

**Multiscan<sup>Plus</sup>** is designed to interface with gas analyzers for real time driving events. Monitor all important systems serial data and gas analysis on the same screen.

## Economic

128MB large capacity memory includes all software applications loaded onboard and still has 2/3 of total free space remaining that allows future vehicle development and expansion.

- No regional software options, no extra cost for adding a software application
- Free of charge update service for one year.
- Software update through Internet.

## Specifications

**Internal Memory : 1Mbyte SRAM**

**Main Memory : 128Mbyte NAND flash memory**

**Dimension : L 221mm(9") X W 182.5mm(7") X T 50mm(2")**

**Weight : 950g (Base unit only)**

**LCD : 320×240 Graphic LCD with backlight**

**Input Device : Membrane keypad**

**Quality system : ISO9141-2 and QS9000 certified**

**EMC compliance : CE / C-tick / FCC approved**

## Features and Functions

1. Ergonomic high tech design, super tough over mold construction technology and user friendly compact size
2. Big capacity 128MB memory for World vehicle coverage: Japanese, Korean, GM, Ford and European vehicles. Wherever you live, Multiscan has it covered.
3. Extra large backlit super clear LCD display.
4. CAN protocol enabled for 2008 CAN implementation.
5. Easy software updates through Internet or CD-ROM.
6. Data stream graphical display functions for easy viewing.
7. "Blackbox" record functions, save and replay events as they happen.
8. Actuator tests, prove the inputs and outputs and check continuity of circuits.
9. Connector location guide, wiring diagrams, scan tool and fault code help menus.
10. Realtime PC interface through USB
11. Emission Analyzer Interface  
Real-time interface with **IM-2400 Ultra 4/5 gas analyzer** that enables simultaneous display, record and replay of scanner data and gas readings.



## USB Interface - CAN Enabled

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