# **Panasonic**

# Cosmos™ Healthy Home System



Homes have a heating and cooling system for comfort. Yet they don't have a healthy air system to ensure occupants breathe clean air. Since poor indoor air quality is the biggest concern among home owners and home buyers, Panasonic created Cosmos™, an intelligent solution for healthier indoor environments.

### **COSMOS<sup>™</sup> Components**

#### PCCC1

Cosmos Command Center Composed of PCHQ1 + FBT002100

#### PCHQ1

Cosmos HQ

#### FBT002100

Cosmos Indoor Air Quality Monitor

#### PCCMZB1

Cosmos Communication Module

Cosmos Mobile Application

Because nothing is more important than a family's health



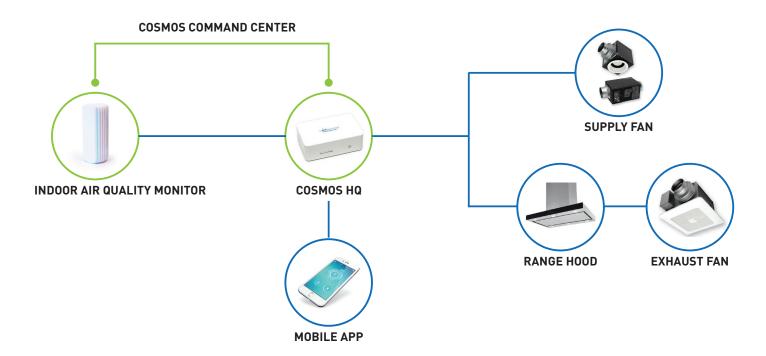
# THE COSMOS™ HEALTHY HOME ADVANTAGE

Cosmos<sup>™</sup> by Panasonic works automatically and discreetly in the background to remove contaminated air and moisture from your home, filter recirculated air and draw in fresh, filtered air from outside.

## **How Cosmos works**

Cosmos utilizes open IoT technology to connect to Panasonic's high-powered ventilation products, including WhisperGreen Select™, WhisperFresh Select™ and WhisperHood IAQ™ to assure occupants breathe clean air at all times.

- Cosmos is the first connected healthy home system that helps you address homeowners' biggest concern: their family's health
- Cosmos intelligently monitors indoor air quality 24x7 and manages four harmful indoor toxins: volatile organic compounds, fine particulate matter, carbon dioxide & humidity
- If unhealthy or contaminated air is detected, sensors automatically activate the system to return air to healthy levels
- Cosmos is the only professionally-installed fresh-air system that helps you maintain a healthy indoor environment and well-conditioned air quality
- Customizable presets let you create personalized settings based on events, such as additional fresh air and increased ventilation for your dinner party next weekend.
- Cosmos is the only system that effectively combines all of the home's ventilation fans, including the range hood to form one complete IAQ system.



# BENEFITS FOR BUILDERS AND HVAC CONTRACTORS

# With Cosmos<sup>™</sup> you can...

- Address buyer health concerns related to poor indoor air quality
- Customize for any size home new construction or renovation
- Build your brand & reputation as a custom, healthy home builder & HVAC contractor
- Comply with code, reduce callbacks & minimize litigation risk
- Increase demand & selling prices

DO IT RIGHT THE FIRST TIME Callbacks cost contractors \$3,000 per incident on average.

# The future of home building and home buying

Millennials comprise more than one-third of all home buyers. They are motivated by digital connectivity and social responsibility. Yet today's smart homes neglect occupant health. While studies report healthy indoor air as a top concern among buyers, Cosmos provides the missing piece that differentiates your homes in the marketplace.



## WHY DO HOMEOWNERS NEED A HEALTHY HOME SYSTEM?

- Indoor air quality (IAQ) is the #1 concern in healthy home building
- Today's tightly built homes trap all sorts of toxins inside, creating an urgent need for better ventilation
- Poor indoor air quality is ranked as the 4th biggest environmental threat in the US
- People spend about 90% of their time indoors, where harmful pollutants can be 2-5x higher, according to the EPA



### DISTURBING FACTS ABOUT BAD INDOOR AIR QUALITY



Health experts estimate that 35 million Americans suffer from upper respiratory tract symptoms that are allergic reactions to airborne allergens<sup>1</sup>



Women who work at home have a 54% higher death rate from cancer than women who work outside the home<sup>2</sup>



Long term effects from repeated exposure to bad indoor air quality include respiratory problems, heart disease and even cancer<sup>3</sup>

GOOD NEWS ABOUT THE AIR YOU BREATHE Now you can reduce the dangers of poor indoor air quality in homes automatically



 $<sup>^{\</sup>rm 1}$  Allergywatch.org – US Department of Health and Human Services, National Institute of Health

<sup>&</sup>lt;sup>2</sup> Toronto Indoor Air Conference

<sup>&</sup>lt;sup>3</sup> US Environmental Protection Agency

## **EXPEL HARMFUL AIRBORNE TOXINS AND BREATHE EASIER**

Cosmos monitors four harmful sources of indoor air contamination. These four categories include dozens of pollutants and unhealthy emissions. Cosmos automatically expels these toxins outdoors to create a healthy home.



#### V<sub>0</sub>Cs

Volatile organic compounds (VOCs) are toxic gases emitted from common items in the home. Furniture, carpeting, shower curtains, flooring, wood, paint and other common materials and cleaners emit volatile organic compounds such as formaldehyde, ammonia, xylene, benzene, and trichloroethylene. Repeated exposure to these chemicals can have short and long term adverse health effects.



#### Particulate matter 2.5

Fine particles (also known as particulate matter 2.5 or PM2.5) are tiny particles or droplets that are less than 2.5 microns in width and travel through the air, into the respiratory tract and lungs. Medical studies show that particulates suspended in the air can be absorbed deep into the lungs, causing ailments such as chronic bronchitis, reduced lung function, and even increased rates of lung cancer and heart disease.

Common sources of particulate matter include cooking vapors, burning candles & oil lamps, fireplaces, and kerosene space heaters.



#### Carbon dioxide

Carbon dioxide (CO<sub>2</sub>) build-up depends on a variety of factors. The number of people in a room, the amount of outdoor fresh air coming in, and combustion by-products contaminating the indoor air such as idling vehicles in garages. While generally not found at hazardous levels indoor, at high levels carbon dioxide can cause headaches, dizziness, nausea and other symptoms.



### **Humidity & moisture**

Humidity and condensation from hot showers, baths, and leaks can lead to airborne mold spores and mildew, both which can be hazardous to human health. Mold spores may go undetected and spread quickly if not managed, making it difficult and expensive to remedy. Moisture can cause structural damage to your bathroom, ruining fixtures and cabinetry by encouraging rust and surface buckling. Cosmos manages excess moisture in the home before it causes permanent damage and health problems.

# **COSMOS™ SYSTEM COMPONENTS**

## **Cosmos Command Center**



### Cosmos HQ

Monitors system operations in real-time, receives alerts and recommendations, and automates processes efficiently

### **Cosmos Indoor Air Quality Monitor**

Constantly monitors indoor air quality levels to determine when outside the normal range. Color coded LED lights provide instant air quality reading



#### **Cosmos Communication Modules**

Provides communication for signal reliability among Cosmos components



### Mobile App

Provides data on your home's indoor air quality in an easy to read dashboard, you'll know when something is wrong, and how Cosmos resolves it, automatically.

# **COSMOS™ PRODUCTS**

## WhisperGreenSelect"



- Provides powerful, quiet ventilation to the Cosmos system for removal of unhealthy air and moisture
- Ideal for use in bathrooms, laundry rooms, basements, sunrooms and garages
- Exclusive HVI Certified True Flow ratings at .375" static pressure assures code compliance
- Only IoT compatible ventilation fan on the market

## WhisperFresh Select



- Provides the filtered fresh air supply solution for Cosmos
- Can be used as a re-circulation filtration device with standard MERV 8 or optional MERV 13 filter
- Only IoT fresh air supply fan available

## Recessed Inlet®



- Enables Cosmos the flexibility of providing exhaust or supply air with a designer recessed inlet
- For use with WhisperFresh Select™ in any room or hallway

# WhisperHood IAQ



- High-velocity, superior capture efficiency provides Cosmos with exceptional ventilation in the room with the most contaminated air, the kitchen
- Only Range Hood available that is part of a Healthy Home IAQ system and is IoT compatible
- Available in five beautiful styles



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